

KSE772

SemiHow
Know-How for Semiconductor

KSE772

Audio Frequency Power Amplifier

- Low Speed Switching
- Complement to KSE882

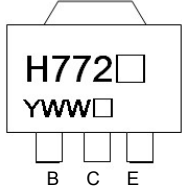
3 Amperes
 PNP Epitaxial Silicon Transistor
 1.2 Watts

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

CHARACTERISTICS	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current(DC)	I_C	-3.0	A
*Collector Current(Pulse)	I_{CP}	-7.0	A
Base Current(DC)	I_B	-0.6	A
Collector Dissipation($T_C=25^\circ\text{C}$)	P_C	1.2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~150	$^\circ\text{C}$

SOT-89

1. Base
 2. Collector
 3. Emitter



*Plus Width \leq 10ms, Duty \leq 50%

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

CHARACTERISTICS	SYMBOL	Test Condition	Min	Typ.	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-1	μA
*DC Current Gain	h_{FE1} h_{FE2}	$V_{CE} = -2V, I_C = -20\text{mA}$ $V_{CE} = -2V, I_C = -1\text{A}$	30 60	220 160	400	
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -0.2\text{mA}$		-0.3	-0.5	V
*Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -2A, I_B = -0.2\text{mA}$		-1.0	-2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -5V, I_C = -0.1\text{A}$		80		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0$ $F = 1\text{MHz}$		55		pF

* Pulse Test: Pulse Width \leq 300 μs , Duty Cycles \leq 2%

Note.

hFE2 Classification	R	60 ~ 120
	O	100 ~ 200
	Y	160 ~ 320
	G	250 ~ 500

Package Mark information.

H772Y YWWG	Y	hFE2 Classification
	YWW	Y; year code, WW; week code
	G	Assembly code

Typical Characteristics

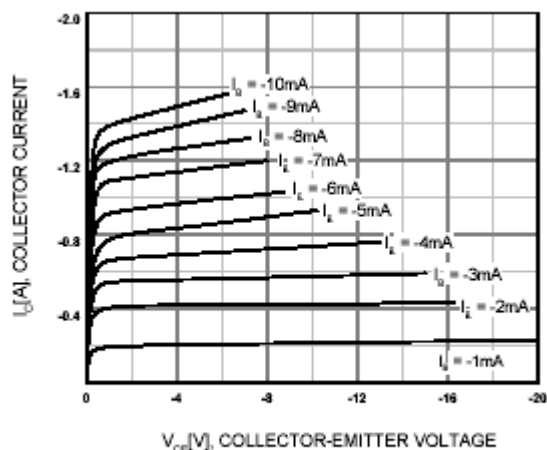


Figure 1. Static Characteristic

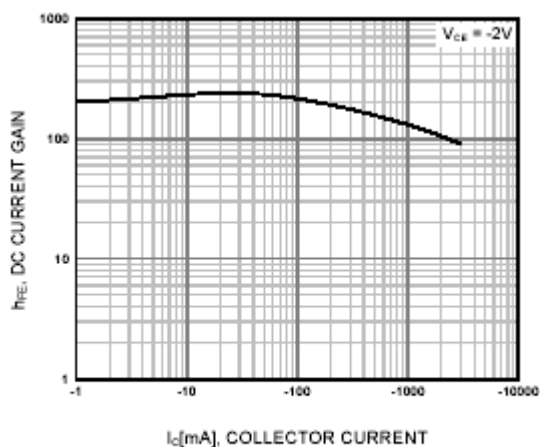


Figure 2. DC current Gain

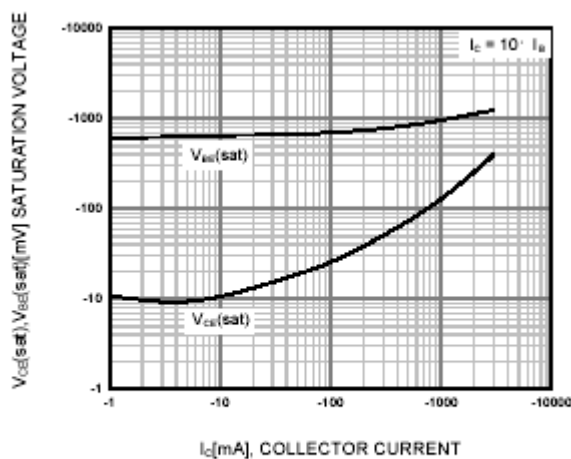


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

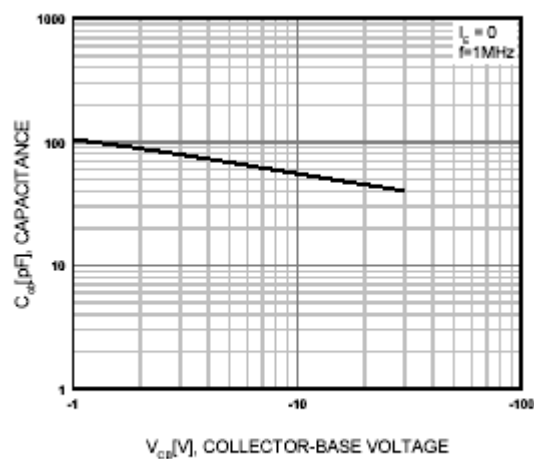


Figure 4. Collector Output Capacitance

Typical Characteristics (Continued)

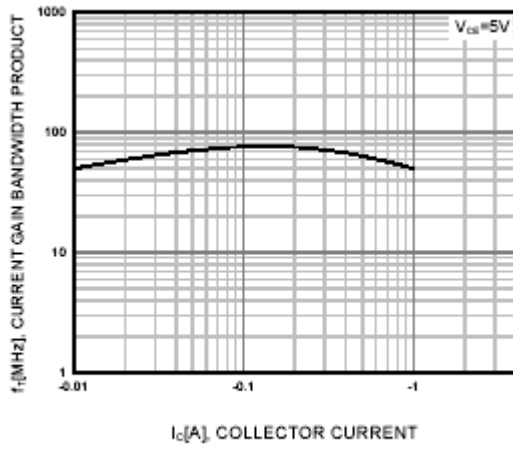


Figure 5. Current Gain Bandwidth Product

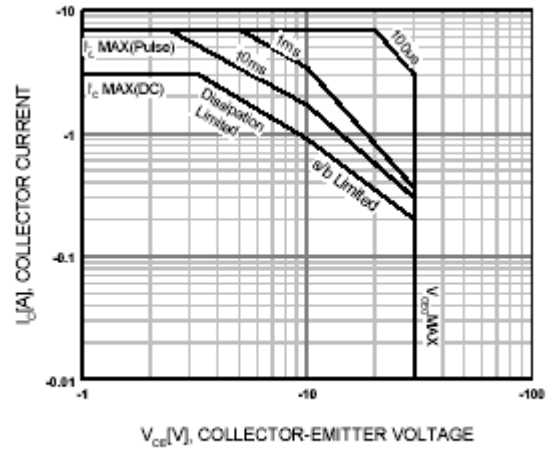


Figure 6. Safe Operating Area

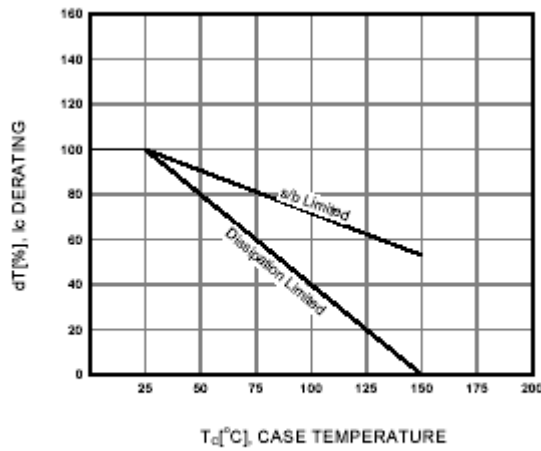


Figure 7. Derating Curve of Safe Operating Areas

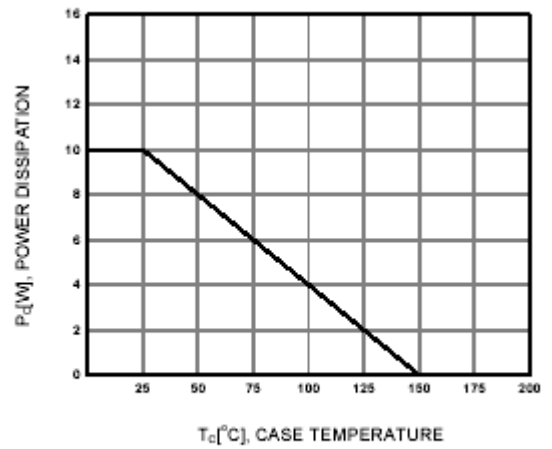
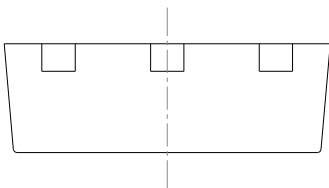
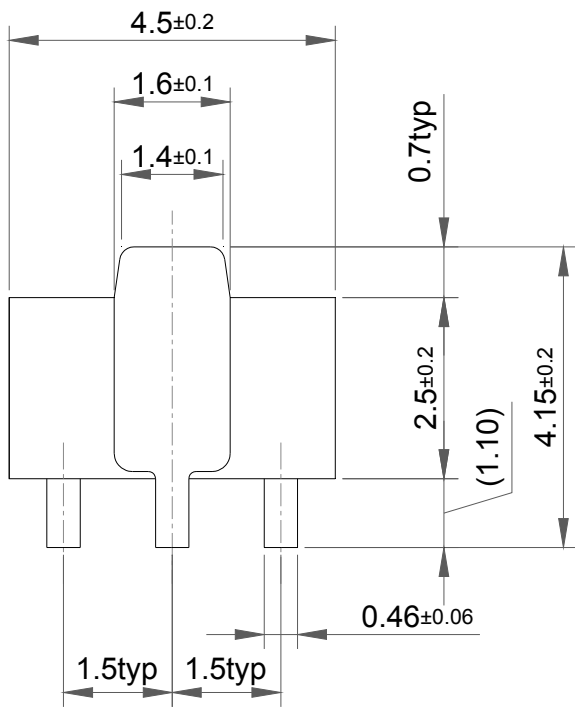


Figure 8. Power Derating

Package Dimensions

SOT-89



Dimensions in Millimeters